UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,363	12/31/2003	Krishna Bharat	Google-44 (GP-096-00-US)	4908

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EXAMINER
AUGUSTIN, EVENS J

ART UNIT	PAPER NUMBER
3621	

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _23 May 2006_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1,3,5-33,35 and 37-66_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1, 3, 5-33, 35, and 37-66_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _31 December 2003_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Status of Claims

1. Claims 1, 3, 5-33, 35, and 37-66 have been examined.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition
> of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requires of this title.

Claims 1, 3, 5-33, 35, and 37-66 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)).

Although the courts have yet to define the terms useful, concrete, and tangible in the context of the practical application requirement for purposes of these guidelines, the following examples illustrate claimed inventions that have a practical application because they produce useful, concrete, and tangible result:

- Claims drawn to a long-distance telephone billing process containing mathematical algorithms were held to be directed to patentable subject matter because "the claimed

process applies the Boolean principle **to produce a useful, concrete, tangible result
without pre-empting other uses of the mathematical principle.**" AT &T Corp. v.
Excel Communications, Inc., 172 F.3d 1352, 1358, 50 USPQ2d 1447, 1452 (Fed.
Cir.1999);

- "Transformation of data, representing discrete dollar amounts, by a machine through a
series of mathematical calculations **into a final share price**, constitutes a practical
application of a mathematical algorithm, formula, or calculation, because **it produces a
useful, concrete and tangible result' -- a final share price momentarily fixed for
recording and reporting purposes and even accepted and relied upon by
regulatory authorities and in subsequent trades.**" State Street, 149 F.3d at 1373, 47
USPQ2d at 1601;

- Claims drawn to a rasterizer for converting discrete waveform data samples **into anti-
aliased pixel illumination intensity data to be displayed on a display means** were
held to be directed to patentable subject matter since the claims defined "a specific
machine to produce a useful, concrete, and tangible result." In re Alappat, 33 F.3d 1526,
1544, 31 USPQ2d 1545, 1557 (Fed. Cir. 1994).

A process that consists solely of the manipulation of an abstract idea is not concrete or
tangible. See In re Warmerdam, 33 F.3d 1354, 1360, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994).
See also Schrader, 22 F.3d at 295, 30 USPQ2d at 1459.

In the present case, the USPTO has determined that claims 1, 3, 5-33, 35, and 37-66 are nothing more than the manipulation of data within a computing environment. The aspects of taking search information or data provided by the user, graphing users versus the results of previous searches (data), and correlate the users with the searches and search results (data) are operations of normal computing device. The current claims failed to indicate how the determined profiles are configured and interrelated to provide a specific functionality. The claims do not provide a relationship between the profiles to other subject matter outside a computing device that constitutes the invention i.e., targeted advertising.

Claim Objections

3. Claims 1 and 3, 33, 35 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 1 and 33 indicate that search information is independent of the documents retrieved from the search results, but claims 3 and 33 indicate that the user search information is dependent search result information. One can infringe on independent claims 1 and 33 and not infringe on claims on 3 and 35.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1 and 3, 33, 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 33 indicate that search information is independent of the documents retrieved from the search results, but claims 3 and 33 indicate that the user search information is dependent search result information. One can infringe on independent claims 1 and 33 and not infringe on claims on 3 and 35).

Also, Claims 1 and 33 indicate that search information is independent of the documents retrieved from the search results. The USPTO contends that the search results could not be independent of the user's search query information. The premise behind search programs is to provide the user with relevant information or documents, based on the user's search information or interest. The USPTO contends that a search program that provides users with search results that are independent or irrelevant from the user's search interests is considered inoperable.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art ·
> are such that the subject matter as a whole would have been obvious at the time the invention was made to
> a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

7. Claims 1-26 and 33-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herz

et al. (U.S 5,754,939), in view of Konig et al. (U.S 6981040).

As per claims 1-26 and 33-58, Herz et al. discloses a computer system for evaluating

customer and document/object profiles to automatically generate "target profiles" that most

likely will interest the user. The computer system comprises apparatus with means (column 28,

lines 43-67, columns 29, 30, figures 1 and 2) to do the following:

- Obtaining user profile attributes such as age and zip code (physical location) (column 4,

    lines 54-55). The system also stores profiles of documents which enables a user to access

    target objects of relevance and interest to the user without requiring the user to expend an

    excessive amount of time and energy (column 4, lines 35-42) – *Claims 1, 14, 33, 46*

- Getting a summary of digital profiles of target objects that user likes or dislike (column 4,

    lines 56-58). The system can also infer the user/document interest (profile) from the

    user's behavior (column 17, lines 33-35). For example, the system might monitor which

    documents the user chooses to read, or not to read, and how much time the user spends

    reading them (column 17, lines 35-38) - *Claims 1, 3, 14, 33, 35, 46*

- Getting user profiles determined from past searches submitted by user (column 4, lines 58-61) – *Claims 4, 34, 36*

- Attributes having values (column 10, lines 8-9, line 52, column 12, line 58) and scores (column 12, lines 60-67, column 13, lines 1-9). The score represents the frequency in which a particular attributes appears in a document. Thus, the score represents the likelihood of particular attribute being correct – *Claims 5, 6, 18, 19*, 37, 38, 50, 51

- A node being examined as a device that is connected, as part of a computer network and the way data is stored in those devices so that it can be used efficiently. The edges are being examined as a set of connections or links between objects or nodes. In figures 1 and 2, these devices consist of information servers (figure 1 items I1 and In), vendor servers (figure 1, items V1 and Vn) and user devices (figure 2, items T1-Tn). These nodes and links are further represented in figures 3 and 4. The information servers contain the target documents (column 26, line 37, column 29, line 1-5) being requested and accessed by the user (column 28, 66-67, column 29, lines1-5). The system can link users to documents based on users' interest to the documents or other documents associated with each link (column 60, lines 62-64) – *Claims 7, 20, 39, 52*

- The system can relate a user with past searches words such past interest in films whose review text (attribute h) contains words like "chase," "explosion," "explosions," "hero," "gripping," and "superb" (column 10, lines 37-42). The system can also record **associations** between documents (movies) and **users** column 10, lines 43-46). A good indication that the user wants to rent a particular movie is that the user has previously rented other movies with similar attribute values. For example, if the user has often liked

movies that customer 1 and customer 2 have rented, then the user may like other such movies. Since the system can system relationships between users and documents one skilled in the art could easily infer from these relationships to create graphs (column 10, lines 46-53). In **graph theory**, a graph describes a set of connections between objects. Each object is called a **node** or vertex. The connections themselves are called **edges** or arcs – *Claims 7-12, 20-25, 39-44, 52-57*

- Attributes are multiplies by a weight, a weighted attributes are added together (column 18, lines 63-67, column 19, lines 1-7) – *Claims 13, 26, 45, 58*

- The system gathers documents with similar profiles, based on their content. In this case, the system gets information about intrinsic properties of users and/or documents (column 23, lines 55-65) – *Claims 15, 17, 47*

- System using document meta data (column 11, lines 4-15) – *Claims 16, 17, 48, 49*

Herz et al. does not explicitly describe an invention with a node that represents document or users. However, Konig et al. describes an invention that relates generally to methods for personalizing a user's interaction with information in a computer network. More particularly, it relates to methods for predicting user interest in documents and products using a learning machine that is continually updated based on actions of the user and similar users. According to Konig et al., the invention provides an information personalization method that models the user as a function **independent of any specific representation or data structure**, and represents the user interest in a document or product independently of any specific user information need (column 4, lines 3-5). The invention monitors the user to create a set of document associated

with the user (column 20-35). Figures 5A and 6A represent nodes that represents a particular

user. Therefore, it would have been obvious for one skilled in the art to have a system that have

graphical representation of users and/or document, because, in computer science, a graph is an

abstract data type (ADT) **that consists of a set of nodes and a set of edges that establish**

relationships (connections) between the nodes. The motivation for one skilled to use graph

would be to establish relationships between the user and/or document.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art
> are such that the subject matter as a whole would have been obvious at the time the invention was made to
> a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

9. Claims 27-32 and 59-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over (U.S

5,754,939), in view of Konig et al. (U.S 6981040) and in further view of Mai et al. (U.S

20020049635).

As per claims 27-32 and 59-64, Herz et al. and Konig et al. disclose a computer system

for evaluating customer and document/object profiles to automatically generate "target profiles"

that most likely will interest the user. The computer system comprises apparatus with means

(column 28, lines 43-67, columns 29, 30, figures 1 and 2) to do the following:

- Obtaining user profile attributes such as age and zip code (physical location) (column 4,

  lines 54-55). The system also stores profiles of documents which enables a user to access

target objects of relevance and interest to the user without requiring the user to expend an
excessive amount of time and energy (column 4, lines 35-42)

- Getting a summary of digital profiles of target objects that user likes or dislike (column 4,
  lines 56-58). The system can also infer the user/document interest (profile) from the
  user's behavior (column 17, lines 33-35). For example, the system might monitor which
  documents the user chooses to read, or not to read, and how much time the user spends
  reading them (column 17, lines 35-38)

- Getting user profiles determined from past searches submitted by user (column 4, lines
  58-61)

- In a addition to age and geographic location, Herz et al. also teaches the user's natural
  language associated with attributes (column 63, lines 45-48)

- Matching users and target objects by automatically calculating, using and updating
  profile information that describes both the users' interests and the ads' characteristics
  (column 6, 4-7). Attributes of a document may include, but are not limited to, the
  following: (1) long pieces of text (a newspaper story, a movie review, a product
  description or an advertisement) (column 6, lines 20-23)

Herz et al. and Konig et al. did not explicitly describe a method/apparatus in which the
ads are scored based on the attributes of the users and documents. However, Mai et al. describes
a method that assigns a score to each advertisement based on the advertisement's correlation with
the user profile (e.g., correlation to the content preferences and/or demographic data in the user
profile 12) (page 8, ¶ 77). For example, an advertisement will receive a highest score if there is
an exact match between an advertisement's correlation number and the displayed content's

program classification (e.g., the advertisement for golf clubs for display during the display of a

golf tournament), a second highest score if the correlation number is in the same sub-category as

the program classification 82, but not an exact match (i.e., different program type indicated by

numbers), a third highest score if the correlation number is in the same general category as the

program classification 82, and so on (page 5, ¶ 46). Therefore, it would have been obvious for

one of ordinary skill in the art at the time of the applicant's invention to construct a system

method/apparatus in which ads are scored based on the attributes of the users and documents. It

would have been obvious for one of ordinary skill in the art at the time of the applicant's

invention to construct a system method/apparatus in which ads are scored based on the attributes

of the users and documents because it would provide advertisers with means to measure their ads

by indicating how well an advertisement correlates with a particular item of displayed content

(page 5, ¶ 46). By measuring the efficiency of ads, advertiser may be able reduce their

advertising costs by paying less for ads that don't score very high.

Conclusion

10. The USPOT has pointed out particular references contained in the prior arts of record in the

body of this action for the convenience of the applicant. Although the specified citations are

representative of the teachings in the art and are applied to the specific limitations within the

individual claim, other passages and figures may apply as well. It is respectfully requested

that if the applicant is preparing to respond, to consider fully the entire references as

potentially teaching all or part of the claimed invention, as well as the context of the passage

as taught by the prior arts or disclosed by the examiner.

11. Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Evens Augustin whose telephone number is 571-272-6860. The

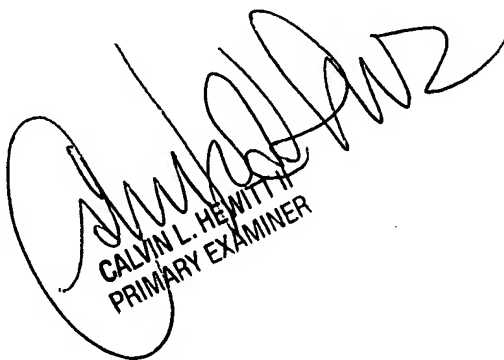examiner can normally be reached on 10am - 6pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Calvin Hewitt can be reached on (571)272-6705.

Any response to this action should be mailed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Any inquiry of a general nature or relating to the status of this application should be
directed to the Group receptionist whose telephone number is 571-272-6584.

Evens J. Augustin
July 28, 2006
Art Unit 3621

CALVIN L. HEWITT
PRIMARY EXAMINER